



# UNITED STATES PATENT AND TRADEMARK OFFICE

NV

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/651,206

08/29/2003

Makoto Honda

DAIN: 749

7627

6160

7590

10/05/2004

PARKHURST & WENDEL, L.L.P.  
1421 PRINCE STREET  
SUITE 210  
ALEXANDRIA, VA 22314-2805

EXAMINER

KOVAL, MELISSA J

ART UNIT

PAPER NUMBER

2851

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/651,206	<b>Applicant(s)</b> HONDA ET AL.	
	<b>Examiner</b> Melissa J Koval	<b>Art Unit</b> 2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,5,9 and 12-14 is/are rejected.
- 7) ☒ Claim(s) 2-4,6-8,10 and 11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/12/2004</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Specification***

Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because it exceeds 150 words.  
Correction is required. See MPEP § 608.01(b).

### ***Claim Objections***

Claim 1 is objected to because of the following informalities: In claim 1, line 13, the word -- plurality -- is incorrectly spelled "plarality". Appropriate correction is required.

Claim 13 should depend from claim 12, as claim 13 seems to be referring to the "surface layer" as set forth in claim 12. No "surface layer" specifically appears in claim 1 from which claim 13 now depends.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5, 9, and 12-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Mitani et al. ('313).

Refer to Figures 18 and 19 of Mitani et al. ('313), for example.

Claim 1 sets forth: "A lens sheet (Refer to column 1, lines 38 through 46 of '313.) for diffusing light that enters the lens sheet from a rear side (Incident light 109 enters the light transmission screen from the rear side opposite the viewing surface. The viewer

Art Unit: 2851

angle is better described with respect to Figure 19. See column 2, lines 19 through 30, for example. Also see column 1, lines 47 through 53.) and allowing the diffused light to emerge from the lens sheet toward a viewing side, comprising:

- a sheet-shaped part (lenticular lens sheet 102);

- a lens part formed on a light-incident-side surface of the sheet-shaped substrate part (lenticular lenses 104); and

- an extraneous-light absorbing part formed on a portion of the light-emergent-side surface of the sheet-shaped substrate part through which light converged by the lens part does not pass (See extraneous light absorbing part 106. Also see column 1, lines 54 through 60.);

- wherein the extraneous-light absorbing part includes a base material, and a plurality of light-diffusing particles subjected to coloring treatment, incorporated in the base material (See diffusion material 107 and see column 2, lines 31 through 38, and 54 through 59. Also see column 3, lines 37 through 49. The examiner interprets the phrase "foregoing structures" in column 3, line 43, to include reference to Figures 18 and 19 as the Summary of the Invention of '313 discusses the possibility of employing a variety of structures, including conventional ones, for the invention taught by Mitani et al. throughout their specification.).

Claim 5 sets forth: "The lens sheet according to claim 1, wherein the light-diffusing particles protrude partly through a surface of the base material for the extraneous-light absorbing part." Again refer to Figure 18 wherein the diffusing particles protruding partly through the surface can be clearly seen. The physical exposure of

diffusion material on the surfaces of lenticular lenses 105 and the external light absorption layer 106 is described in column 2, lines 31 through 33.

Claim 9 sets forth: "The lens sheet according to claim 1, wherein the extraneous-light absorbing part is electrically conductive." Refer to column 3, lines 37 through 49 of '313. Both carbon and metal salts as described therein maybe used as materials for light absorption and both materials can provide electrical conductivity.

Claim 12 sets forth: "The lens sheet according to claim 1, further comprising a surface layer formed on a surface of the extraneous-light absorbing part, which surface is placed on a side distant from the sheet-shaped substrate part." See filter 108. Refer to column 1, lines 44 through 46, and column 2, lines 19 through 46, of Mitani et al. ('313).

Claim 13 sets forth: "The lens sheet according to claim 1, wherein the surface layer is subjected to coloring treatment." Refer to the term "smoke" described in column 1, line 45.

Claim 14 sets forth: "A rear projection screen comprising a lens sheet as set forth in claim 1." Refer to the "Field of the Invention" of Mitani et al. ('313). Televisions comprise rear projection screens and it is shown in Figure 18 that incident light 109 enters from the rear side opposite the viewing surface.

***Allowable Subject Matter***

Claims 2-4, 6-8, 10 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art neither shows nor suggests a lens sheet having all of the elements of claim 2 and particularly: "wherein the light-diffusing particles are made by dispersing a coloring agent in a base material for the light-diffusing particles; and a content of the coloring agent in each light-diffusing particle is from 1.5 to 55% by weight". This results in a screen having improved image quality because the particles cannot be seen, and the screen has a desirable texture.

The prior art neither shows nor suggests a lens sheet having all of the elements of claim 3 and particularly: "wherein a content of the light-diffusing particles in the extraneous-light absorbing part is from 0.1 to 27.5% by weight". This results in a screen having improved image quality because the reflection of extraneous light is prevented, and the screen has a desirable texture.

The prior art neither shows nor suggests a lens sheet having all of the elements of claim 4, and particularly: "wherein the base material for the extraneous-light absorbing part has a refractive index nearly equal to that of the light-diffusing particles." The results are unexpected with respect to the viewing angle. See Yoshida et al. ('099), for example, cited below wherein it is taught that it is well known in the art that a light

diffuser having a refractive index different from that of the base may be dispersed in the base to contrive a greater viewing angle.

The prior art of record neither shows nor suggests the lens sheet having all of the elements of claim 6, and particularly: "wherein the light-diffusing particles have particle diameters 1.25 to 15 times a thickness of the base material for the extraneous-light absorbing part."

The prior art of record neither shows nor suggests the lens sheet having all of the elements of claim 7, and particularly: "The lens sheet according to claim 5, wherein the light-diffusing particles have particle diameters 2 to 55  $\mu\text{m}$  greater than a thickness of the base material for the extraneous-light absorbing part".

The ranges of both claims 6 and 7 result in a an extraneous-light absorbing surface that is matte, reflection of extraneous light is prevented more effectively, the unevenness of the coating is less recognizable and the surface is less likely to be stained by fingerprints.

The prior art of record neither shows nor suggests the lens sheet of claim 10 and particularly: "an electrically conductive layer that impart electrical conductivity to the extraneous-light absorbing part."

The prior art of record neither shows nor suggests the lens sheet of claim 11 and particularly the orientation of elements with respect to one another as follows: "wherein the electrically conductive layer is formed on a surface of the extraneous-light absorbing part, which surface is placed on a side close to the sheet-shaped substrate part."



***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Abe et al. U.S. Patent 6,307,675 B1 teaches a rear-projection screen for use with a liquid crystal panel as a video source.

Yoshida et al. U.S. Patent 5,066,099 teaches a rear projection screen and method of producing the same.

Kinkelaar et al. U.S. Patent Application Publication US 2004/0001993 A1 teaches gas diffusion layer for fuel cells.

Chiang et al. U.S. Patent Application Publication US 2002/0077402 A1 teaches conductive urethane roller.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa J Koval whose telephone number is (571) 272-2121. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571)272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJK



Handwritten signature of Melissa Jan Koval, with the name "Melissa Jan Koval" written in print below the signature.